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Fractional Discrete Neural Networks with Different Dimensions: Coexistence of Complete Synchronization, Antiphase Synchronization and Full State Hybrid Projective Synchronization

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Abstract: This paper aims to present the coexistence of complete synchronization, antiphase synchronization and full state hybrid projective synchronization in two fractional discrete neural networks with different dimensions. A new theorem is proved, which assures the coexistence of these synchronization types in different dimensional fractional discrete neural networks. Finally, simulation results are reported to confirm the effectiveness of the synchronization approach illustrated herein.

Keywords: neural networks; synchronization; discrete-fractional calculus.

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